CLAIMS

What is claimed is:

1. A method of redirecting a request from a client that may be served by a first server to a second server, the method comprising the computer-implemented steps of:
receiving a client request at the second server;
automatically forwarding the client request to the first server;
receiving a result message from the first server;
identifying, in the result message, references to resources of the first server;
replacing the references to resources of the first server with translated references that reference the second server; and
sending the translated references to the client as a response to the client request.

2. The method recited in Claim 1, further comprising the steps of:
receiving, at the second server, a second client request based on the response; and
for the second client request, repeating the steps of automatically forwarding, receiving a result message, identifying, replacing, and sending.

3. The method recited in Claim 1, wherein the identifying step comprises the steps of:
parsing the result message to identify one or more tags that are associated with references to resources of the first server; and
matching the tags to attributes that identify resources of the first server.

4. The method recited in Claim 3, wherein the replacing step comprises attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

5. The method recited in Claim 1, wherein the replacing step comprises attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

6. The method recited in Claim 1,

wherein the step of receiving a client request at the second server comprises the steps of receiving a client HTTP request at a second Web server;

wherein the step of automatically forwarding the client request to the first server comprises the steps of redirecting the client HTTP request to a first Web server;

wherein the step of receiving a result message from the first server comprises the steps of receiving an HTTP response message from the first Web server that contains an HTML document.

7. The method recited in Claim 6, wherein the step of identifying, in the result message, references to resources of the first server comprises the steps of parsing the HTML document to identify one or more URLs.

8. The method recited in Claim 6, wherein the step of identifying, in the result message, references to resources of the first server comprises the steps of parsing the HTML document to identify one or more relative URLs that lack an explicit reference to the first server or one or more URLs that explicitly reference the first server.

9. The method recited in Claim 6, wherein the steps of identifying and replacing are carried out using a CGI script that may contain one or more associated software elements, and wherein the step of replacing comprises the steps of attaching, to each of the references to resources of the first server, a value that identifies the CGI script.

10. The method recited in Claim 1, wherein the steps of identifying, replacing and sending comprise the steps of:

stream tokenizing the result message into a plurality of tags, each of the tags having zero or more attributes;

storing in an output message any tags that are not associated with references to resources of the first server;

for each tag that is associated with a reference to a resource of the first server:

identifying a resource attribute associated with the tag that identifies the resource;

prepending a value, which identifies a software element that carries out the steps of identifying and replacing, to the resource attribute; and

storing the tag, value, and resource attribute in the output message.

11. The method recited in Claim 1, wherein the first server and the second server form part of a load-balanced server group, and wherein both the first server and the second server are capable of responding to the client request.

12. A data communications apparatus, comprising:

a first server that hosts a resource that may respond to the request and coupled over a network to a client;

a second server coupled to the first server;

means in the second server for receiving a request from the client at the second server, automatically forwarding the request to the first server, and receiving a result message from the first server;

means for identifying, in the result message, references to resources of the first server, and replacing the references to resources of the first server with translated references that reference the second server; and

means for sending the translated references to the client as a response to the request.

13. The apparatus recited in Claim 12, wherein the second server further comprises means for receiving, at the second server, a second client request based on the response, and, for the second client request, for repeating the steps of automatically forwarding, receiving a result message, identifying, replacing, and sending.

14. The apparatus recited in Claim 12, wherein the second server further comprises means for parsing the result message to identify one or more tags that are associated with references to resources of the first server, and for matching the tags to attributes that identify resources of the first server.

15. The apparatus recited in Claim 14, wherein the second server further comprises means for attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

16. The apparatus recited in Claim 12, wherein the second server further comprises means for attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

17. The apparatus recited in Claim 12, wherein the second server further comprises means for receiving a client HTTP request at a second Web server, redirecting the client HTTP request to a first Web server, and receiving an HTTP response message from the first Web server that contains an HTML document.

18. The apparatus recited in Claim 17, wherein the second server further comprises means for parsing the HTML document to identify one or more URLs.

19. The apparatus recited in Claim 17, wherein the second server further comprises means for parsing the HTML document to identify one or more relative URLs that lack an explicit reference to the first server or one or more URLs that explicitly reference the first server.

20. The apparatus recited in Claim 17, wherein the second server further comprises a CGI script that may contain one or more associated software elements, and wherein the second server further comprises means for attaching, to each of the references to resources of the first server, a value that identifies the CGI script.

21. The apparatus recited in Claim 12, wherein the second server further comprises means for stream tokenizing the result message into a plurality of tags, each of the tags having zero or more attributes, for storing in an output message any tags that are not associated with references to resources of the first server, and, for each tag that is associated with a reference to a resource of the first server, for identifying a resource attribute associated with the tag that identifies the resource, prepending a value, which identifies a software element that carries out the steps of identifying and replacing, to the resource attribute, and storing the tag, value, and resource attribute in the output message.

22. The apparatus recited in Claim 12, wherein the first server and the second server form part of a load-balanced server group, and wherein both the first server and the second server are capable of responding to the client request.

23. An apparatus for redirecting a request from a client that may be served by a first server to a second server, the apparatus comprising:

a first server that hosts a resource that may respond to the request and coupled over a network to a client;

a second server coupled to the first server;

a computer-readable medium in the second server comprising one or more sequences of instructions which, when executed by the second server, cause the second server to perform the steps of:

receiving a client request;

automatically forwarding the client request to the first server;

receiving a result message from the first server;

identifying, in the result message, references to resources of the first server;

replacing the references to resources of the first server with translated references that reference the second server; and

sending the translated references to the client as a response to the client request.

24. The apparatus recited in Claim 23, further comprising instructions for performing the steps of:

receiving, at the second server, a second client request based on the response; and

for the second client request, repeating the steps of automatically forwarding, receiving a result message, identifying, replacing, and sending.

25. The apparatus recited in Claim 23, wherein the instructions for performing the identifying step comprise instructions for performing the steps of:

parsing the result message to identify one or more tags that are associated with references to resources of the first server; and

matching the tags to attributes that identify resources of the first server.

26. The apparatus recited in Claim 25, wherein the instructions for performing the replacing step comprise instructions for performing the step of attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

27. The apparatus recited in Claim 23, wherein the instructions for performing the replacing step comprise instructions for performing the step of attaching, to each of the references to resources of the first server, a value that identifies a process of the second server that carries out the identifying step and the replacing step.

28. The apparatus recited in Claim 23,

wherein the instructions for performing the step of receiving a client request at the second server comprise instructions for performing the steps of receiving a client HTTP request at a second Web server;

wherein the instructions for performing the step of automatically forwarding the client request to the first server comprise instructions for performing the steps of redirecting the client HTTP request to a first Web server;

wherein the instructions for performing the step of receiving a result message from the first server comprise instructions for performing the steps of receiving an HTTP response message from the first Web server that contains an HTML document.

29. The apparatus recited in Claim 28, wherein the instructions for performing the step of identifying, in the result message, references to resources of the first server comprises instructions for performing the steps of parsing the HTML document to identify one or more URLs.

30. The apparatus recited in Claim 28, wherein the instructions for performing the step of identifying, in the result message, references to resources of the first server comprise instructions for performing the steps of parsing the HTML document to identify one or more relative URLs that lack an explicit reference to the first server or one or more URLs that explicitly reference the first server.

31. The apparatus recited in Claim 28, wherein the instructions for performing the steps of identifying and replacing are carried out using a CGI script that may contain one or more associated software elements, and wherein the instructions for performing the step of replacing comprise instructions for performing the steps of attaching, to each of the references to resources of the first server, a value that identifies the CGI script.

32. The apparatus recited in Claim 23, wherein the instructions for performing the steps of identifying, replacing and sending comprise instructions for performing the steps of:

stream tokenizing the result message into a plurality of tags, each of the tags having zero or more attributes;

storing in an output message any tags that are not associated with references to resources of the first server;

for each tag that is associated with a reference to a resource of the first server:

identifying a resource attribute associated with the tag that identifies the resource;

prepending a value, which identifies a software element that carries out the steps of identifying and replacing, to the resource attribute; and

storing the tag, value, and resource attribute in the output message.

33. The apparatus recited in Claim 22, wherein the first server and the second server form part of a load-balanced server group, and wherein both the first server and the second server are capable of responding to the client request.

34. A computer-readable medium carrying one or more sequences of instructions for redirecting a client request of a client that may be serviced by a first server, to a second server, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the steps recited in any of Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or 11.